

INSECT SENSING SYSTEMS AND METHODS

ABSTRACT

One example insect sensing system includes a light emitter configured to emit light; a structured light generator positioned to receive the emitted light and configured to generate structured light from the emitted light; a plurality of light sensors arranged in a line, each of the light sensors oriented to receive at least a portion of the structured light and output a sensor signal indicating an amount of light received by the respective light sensor; a processing device configured to: obtain the sensor signals from each of the light sensors, and determine a presence of an insect based a received sensor signal from at least one light sensor, the sensor signal indicating a reduced amount of received light by the at least one light sensor. Another example insect sensing system includes a camera comprising an image sensor and a lens having an aperture of $f/2.8$ or wider; and a processor configured to obtain an image from the camera and detect an insect in the image.

Figure 2